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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appellants : Hiroyuki HOJO et al.

**Group Art Unit: 3711**

Appl. No. : 10/758,019

**Examiner: Kien T. Nguyen**

Filed : January 16, 2004

**Confirmation No.: 5762**

For : BALANCE PRACTICING MACHINE

**APPEAL BRIEF UNDER 37 C.F.R. §41.37**

Commissioner for Patents  
United States Patent and Trademark Office  
Customer Service Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

This appeal is from the Examiner's rejection of claims 1-11, 13-18, and 20-24 under 35 U.S.C. 103(a) as set forth in the Final Office Action dated May 29, 2007. A Notice of Appeal and a Request for a two month Extension of Time under 37 C.F.R. §1.136(a) were timely submitted with appropriate fee payments on October 29, 2007, setting the period for filing the Brief to expire December 31, 2007 (December 29, 2007 being a Saturday). Accordingly, this Appeal Brief is being submitted along with a Request for a one month extension of time to reset the period for filing the Brief to expire on January 29, 2008. Payment of the requisite fee under 37 C.F.R. §41.20(b)(2) is also submitted herewith.

No additional fee is believed to be required for filing the instant Appeal Brief. However, if for any reason the necessary fee is not associated with this file, the undersigned authorizes the

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charging of any filing fees for the Appeal Brief and/or any necessary extension of time fees to Deposit Account No. 19 - 0089.

**(I) REAL PARTY IN INTEREST**

The real party in interest is MATSUSHITA ELECTRIC WORKS, LTD., Japan, as assignee of the entire interest in the above-identified application by an assignment recorded in the U.S. Patent and Trademark Office on April 30, 2004, at Reel 015282 and Frame 0774.

**(II) RELATED APPEALS AND INTERFERENCES**

The Appellants, their legal representatives and the Assignees are not currently aware of any appeals, interferences, or judicial proceedings that may directly affect or be directly affected by or have some bearing on the Board's decision in this appeal. Attached hereto is a Related Proceedings Appendix showing no related appeals or interferences.

**(III) STATUS OF THE CLAIMS**

In the Final Office Action dated May 29, 2007, claims 1-11, 13-18, and 20-24 are pending and rejected. No claims are currently allowed, canceled or withdrawn. Claims 12 and 19 were previously canceled. Accordingly, claims 1-11, 13-18, and 20-24 are being appealed and are listed in the "Claims Appendix" attached herewith.

**(IV) STATUS OF THE AMENDMENTS**

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All amendments have been entered. Accordingly, claims 1-11, 13-18, and 20-24 as presented in the amendment filed March 15, 2007 are being appealed and are listed in the “Claims Appendix” attached herewith.

**(V) SUMMARY OF THE CLAIMED SUBJECT MATTER**

**Independent Claim 1**

By way of non-limiting example, the invention provides for a balance practicing machine. The balance practicing machine comprises a seat 4 on which a user 20 sits, a drive mechanism that imparts a swinging motion to the seat 4 (see, page 6, line 22 through page 7, line 11, i.e., paragraph [0020]), an expandable and contractible member provided at a location of the seat 4 corresponding to thighs of the user 20 sitting on the seat(see, page 7, line 17 through page 8, line 7, i.e., paragraphs [0022] and [0023], and Figs. 2 and 3), and a mechanism that automatically repeatedly expands and contracts the expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat (see, page 7, line 17 through page 9, line 7 and page 11, lines 6 – 13, i.e., paragraphs [0022]-[0026] and [0033]; and Figs. 2 and 3) .

**Independent Claim 18**

By way of non-limiting example, the invention provides for a balance practicing machine. The balance practicing machine comprises a seat 4, a drive mechanism that imparts a swinging motion to the seat 4(see, page 6, line 22 through page 7, line 11, i.e., paragraph [0020]), and a moving device that is repeatedly actuated during operation of said drive mechanism to provide

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compound motion to the seat 4(see, page 6, line 22 through page 7, line 11, i.e., paragraph [0020]). The moving device comprises an expandable and contractible member provided at a location of said seat corresponding to thighs of the user sitting on the seat(see, page 7, line 17 through page 8, line 7, i.e., paragraphs [0022] and [0023], and Figs. 2 and 3), and a mechanism that automatically repeatedly expands and contracts said expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat(see, page 7, line 17 through page 9, line 7 and page 11, lines 6 – 13, i.e., paragraphs [0022]-[0026]and [0033]; and Figs. 2 and 3).

**(VI) GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-11, 13-18, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al., U.S. Patent No. 4,988,300 (hereinafter “Yamaguchi”) in view of Friedson, U.S. Patent No. 6,332,307.

**(VII) ARGUMENTS**

**The rejection of claims 1-11, 13-18, and 20-24 under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi in view of Friedson is in error for the following reasons.**

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the appellants are under no obligation to submit evidence of nonobviousness. To establish a *prima facie* case of obviousness,

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three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.<sup>1</sup> Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2142.

The present invention relates to a balance practicing machine. More specifically, independent claims 1 and 18 recite, in combination with other features, *an expandable and contractible member provided at a location of said seat corresponding to thighs of the user sitting on said seat, and a mechanism that automatically repeatedly expands and contracts said expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat.*

Claims 2-11, and 13-17 depend from independent claim 1, while claims 20-24 depend from independent claim 18. As such, claims 2-11, 13-17, and 20-24 also recite, *inter alia, at least an expandable and contractible member provided at a location of said seat corresponding to thighs of the user sitting on said seat, and a mechanism that automatically repeatedly expands and contracts*

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<sup>1</sup> While the *KSR* court rejected a rigid application of the teaching, suggestion, or motivation (“TSM”) test in an obviousness inquiry, the [Supreme] Court acknowledged the importance of identifying “a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does” in an obviousness determination. *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 492

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*said expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat.*

As set forth on pages 2 and 3 of the Final Office Action dated May 29, 2007, the Examiner asserts that Yamaguchi discloses all of the features of the invention claimed in claims 1-12 and 19 except for an expandable and contractible member provided on a seating surface of the seat. The Examiner then takes the position that “Friedson disclosed a saddle assembly comprising an expandable and contractable member in a form of an air blader (25)(see Fig.7) providing on each side of the saddle which inherently including positions in oppose the thighs and knees of the user, and a mechanism (26) for expanding and contracting the member (see column 4, lines 64-67 and column 5, lines 1-9). Therefore, it would have been obvious to one of ordinary skill in the art to modify the machine of Yamaguchi et al by integrally adding the bladder as taught by Friedson for the purpose of providing comfort for the user as well as enhancing the motion of the seat during operation.” (Final Office Action, pages 2-3).

The Examiner also states that “[R]egarding the limitation “automatically” in claims 1 and 18, it is well settled that it is not an invention to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result see In re Venner, 120 USPQ 192 (CCPA 1958).

**I. Claims 1 and 18**

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F.3d 1350, 1356-1357 (Fed. Cir. 2007) (quoting *KSR International Co. v. Teleflex Inc.*, --- U.S. ----, 127 S.Ct. 1727, 1731 (2007)).

Appellants respectfully disagree with the Examiner's rejection, and submit that no proper combination of the applied art discloses or suggests the features of at least independent claims 1 and 18.

*(i) Yamaguchi, as admitted by the Examiner, fails to provide a balance practicing device as claimed, and Friedson fails to cure the deficiencies of Yamaguchi. Furthermore, even assuming, arguendo, that the teachings of YAMAGUCHI and FRIEDSON could be properly combined, Appellants' claimed balance practicing machine would not have resulted from the combined teachings thereof.*

Yamaguchi discloses a riding simulator. As apparently recognized by the Examiner, Yamaguchi does not disclose in any manner "an expandable and contractible member provided at a location of thighs of the user sitting on said seat", or a "a mechanism that automatically repeatedly expands and contracts said expandable and contractible member in a diagonal direction during operation of the drive mechanism to provide compound motion to the seat", as required by independent claims 1 and 18.

Thus, the Examiner has proposed to combine the teachings of Friedson with those of Yamaguchi in an attempt to provide the missing elements.

Friedson is directed to a collapsible saddle assembly. As shown in figure 7 and as described in column 4, line 55 through column 5, line 10, Friedson includes a cavity 21 that may be filled so as to "accommodate a different user or equestrian application". The cavity may be filled with a filler material such as wool stuffing or polyurethane, or the cavity may include a bladder filled with air. Friedson includes an access opening 23 for inserting and removing filler (*i.e.*, expanding and

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contracting the cavity) or a valve 26 for filling and removing air from the bladder (*i.e.*, expanding or contracting the bladder). While Appellants admit that Friedson may suggest to one of ordinary skill in the art that such a saddle adjustment assembly may be suitable for modification of the saddle of the exercising device of Yamaguchi, Friedson clearly does not teach or suggest that the cavity should be, or even could be, expanded or contracted *during operation of the drive mechanism to provide compound motion to the seat*, much less *repeatedly expanded and contracted during operation of the exercising device*.

Accordingly, the Friedson patent fails to teach or suggest a balance practicing machine including, inter alia, an expandable and contractible member provided at a location of the seat corresponding to thighs of the user sitting on the seat, and a mechanism that automatically repeatedly expands and contracts the expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat, as recited in claims 1 and 18. Therefore, even if the teachings of Friedson and be properly combined with the teachings of Yamaguchi, such combination would not result in the invention recited in Appellants' independent claims 1 and 18. Thus, the rejection of independent claims 1 and 18 under 35 U.S.C. § 103(a) based on Yamaguchi and Friedson is improper for this reason alone.

(ii) *The Examiner has not provided any factual evidence to support the conclusion that it would have been obvious to repeatedly expand and contract the bladder 25 of Friedson during use with the machine of Yamaguchi.*



In the Response to Arguments of the Final Office Action dated May 29, 2007, the Examiner has asserted that the term “repeatedly” in claims 1 and 18 does not limit as to how or how often, and/or when the mechanism “repeatedly” expands and contracts the member. The Examiner has further asserted that the valve 26 of Friedson is “conceivably capable” of repeatedly inflating (expanding) and deflating (contracting) the bladder 25, and maintains that such interpretation of Friedson clearly meets the claimed invention in the above explanation.

Addressing the Examiner’s first assertion, that the term “repeatedly” does not limit as to how or how often, and/or when the mechanism “repeatedly” expands and contracts, Appellants respectfully note that Webster’s New World Dictionary of American English, Third College Edition, 1991, defines “repeated” as “said, made, done, or happening again, or again and again”. As apparent from Appellants specification, “repeatedly” as used in the context of claims 1 and 18 means “happening again and again”. While Appellants may agree that “repeatedly” may not indicate how or how often, and/or when the mechanism “repeatedly” expands and contracts, it clearly does limit the operation to expanding and contracting repeatedly, i.e., again and again. The Examiner has not provided any factual evidence to support the position that it would have been obvious to repeatedly expand and contract the bladder 25 of Friedson during use with the machine of Yamaguchi, much less that it should be repeatedly expanded and contracted. Thus, the term “repeatedly” is clear, and clearly limits the mechanism and operation of Appellants’ claimed balance practicing device to include repeated expanding and contracting of the expandable and contractible member, which is clearly neither taught nor suggested by Yamaguchi or Friedson. Accordingly, the Examiner’s

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rejection of independent claims 1 and 18 under 35 U.S.C. § 103(a) is defective for this additional reason.

Furthermore, with regard to the limitation “automatically” in claims 1 and 18, the Examiner asserts that it is well settled that it is not an invention to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result in view of In re Venner, 120 USPQ 192 (CCPA 1958).

Without disagreeing as to the underlying principal of Venner, Appellants respectfully disagree with the Examiner’s assertion for the simple reason that there is no teaching or suggestion in Friedson of even a manual repeated expansion and contraction of the valve, nor is there any reason to do so. The Examiner’s bald statement that the device of Friedson is “conceivably capable” of such operation is not the standard for obviousness set forth in 35 U.S.C. § 103(a), which is what would have been obvious at the time of Appellants’ invention to one having ordinary skill in the art. Accordingly, since there is no teaching or suggestion of manual repeated expanding and contracting of the bladder 25 of Friedson, clearly there can be no support for the Examiner’s use of the per se rule “that it is not an invention to broadly provided a mechanical or automatic means to replace manual activity which has accomplished the same result”. There is no evidence of any such manual activity which has accomplished the same result, and thus no reason to further bootstrap a faulty obviousness rejection with further faulty supposed legal support. Thus, the Examiner has not presented any factual evidence of the obviousness of Appellants’ claimed automatically repeatedly expanding and contracting of the expandable and contractible member to provide compound motion of the seat in the manner recited in independent claims 1 and 18. Therefore, the rejection of

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independent claims 1 and 18 under 35 U.S.C. § 103(a) based on Yamaguchi and Friedson is improper for these additional reasons.

*(iii) There is nothing in the cited prior art that would lead one of ordinary skill in the art to make the modification suggested by the Examiner in the rejection of claims 1 and 18 under 35 U.S.C. § 103(a) over Yamaguchi in view of Friedson.*

In this regard, Applicants note that Yamaguchi is relevant to a balance practicing machine, whereas the device of Friedson is relevant to a saddle for actual horse back riding. As noted above, while it might be obvious to provide the saddle of the device of Yamaguchi with a saddle adjustment device in accordance with the teachings of Friedson, the only reason to reach the conclusion that the combination of the teachings of Yamaguchi and Friedson would provide an exercising device as recited in claims 1 and 18 that includes, inter alia, a mechanism that automatically repeatedly expands and contracts the expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat can only result from a review of Appellants' disclosure and the application of impermissible hindsight. Neither Yamaguchi nor Friedson teaches anything related to Appellants' claimed drive mechanism that automatically repeatedly expands and contracts the expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat. The only such teaching appears in Appellants' disclosure, and adoption of this teaching from Appellants' disclosure is clearly impermissible hindsight. Thus, the rejection of claims 1 and 18

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under 35 U.S.C. § 103(a) over the teachings of Yamaguchi and Friedson is improper for this additional reason.

Accordingly, the rejection of independent claims 1 and 18 under 35 U.S.C. § 103(a) over Yamaguchi in view of Friedson is improper for all the above reasons and withdrawal thereof is respectfully requested.

**(a) Claim 4**

Claim 4 depends from allowable claim 1, and additionally recites that the expandable and contractible member comprises a first expandable and contractible element and a second expandable and contractible element, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(b) Claim 5**

Claim 5 indirectly depends from allowable claim 1, and additionally recites that the first and second expandable and contractible elements are positioned on opposite sides of the seat, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(c) Claim 6**

Claim 6 indirectly depends from allowable claim 1, and additionally recites that the first and second expandable and contractible elements are positioned to oppose the thighs and knees of the user when the user sits on the seat, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(d) Claim 7**

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Claim 7 indirectly depends from allowable claim 1, and additionally recites that the first and second expandable and contractible elements expand and contract in substantially opposite directions, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(e) Claim 8**

Claim 8 indirectly depends from allowable claim 1, and additionally recites that the first and second expandable and contractible elements are positioned to oppose the thighs and knees of the user when the user sits on the seat, so that the user's hip joints open and close when said first and second expandable and contractible elements expand and contract, respectively. Such structure is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(f) Claims 15 and 17**

Claims 15 and 17 indirectly depend from allowable claim 1, and additionally recites that the elevator is repeatedly raised and lowered during operation of the drive mechanism to provide compound motion to the seat, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(g) Claim 20**

Claim 20 depends from allowable claim 18, and additionally recites an elevator mechanism provided to raise and lower the seat, wherein the elevator is repeatedly raised and lowered during operation of the drive mechanism to provide additional compound motion to the

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seat, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(h) Claims 21 and 22**

Claim 21 depends from allowable claim 1, claim 22 depends from allowable claim 18, and each of claims 21 and 22 additionally recites that the swinging motion comprises three degrees of freedom of movement to the seat in the form of a longitudinal (forward and backward) reciprocating linear motion and reciprocating pivoting motions around a fore-aft (longitudinal) and traverse axes, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

**(i) Claim 23 and 24**

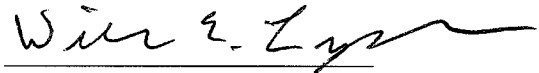
Claim 23 depends from allowable claim 1, claim 24 depends from allowable claim 18, and each of claims 23 and 24 additionally recites that the expandable and contractible member is provided integrally with the balance practicing machine, which is neither taught nor suggested by Yamaguchi or Friedson, considered alone or in any proper combination.

Accordingly, the rejection of dependent claims 4 - 8, 15, 17, and 20-24 under 35 U.S.C. § 103(a) over Yamaguchi in view of Friedson is improper in view of their respective dependency from allowable claims 1 and 18, but also for all the above reasons, and withdrawal of the rejection thereof is respectfully requested.

**Conclusion**

In view of the foregoing remarks, Appellants submit that claims 1-11, 13-18, and 20-24 are patentably distinct from the prior art of record and are in condition for allowance. Accordingly, Appellants respectfully request that the Board reverse the Examiner's rejection of claims 1-11, 13-18, and 20-24 and remand the application to the Examiner for allowance of the pending claims.

Respectfully submitted,  
Hiroyuki HOJO et al.



Bruce H. Bernstein  
Reg. No. 29,027

William E. Lyddane  
Reg. No. 41,568

January 11, 2008  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191

**(VIII) CLAIMS APPENDIX**

The following is a listing of the claims involved in the appeal.

1. A balance practicing machine comprising:  
  
a seat on which a user sits;  
  
a drive mechanism that imparts a swinging motion to said seat;  
  
an expandable and contractible member provided at a location of said seat corresponding to thighs of the user sitting on said seat; and  
  
a mechanism that automatically repeatedly expands and contracts said expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat.
2. The balance practicing machine according to claim 1, wherein said seat has a saddle shape.
3. The balance practicing machine according to claim 1, wherein said expandable and contractible member is positioned to oppose the thighs and knees of the user when the user sits on said seat.
4. The balance practicing machine according to claim 1, wherein said expandable and contractible member comprises a first expandable and contractible element and a second expandable and contractible element.



5. The balance practicing machine according to claim 4, wherein said first and second expandable and contractible elements are positioned on opposite sides of said seat.

6. The balance practicing machine according to claim 4, wherein said first and second expandable and contractible elements are positioned to oppose the thighs and knees of the user when the user sits on said seat.

7. The balance practicing machine according to claim 4, wherein said first and second expandable and contractible elements expand and contract in substantially opposite directions.

8. The balance practicing machine according to claim 4, wherein said first and second expandable and contractible elements are positioned to oppose the thighs and knees of the user when the user sits on said seat, so that the user's hip joints open and close when said first and second expandable and contractible elements expand and contract, respectively.

9. The balance practicing machine according to claim 4, wherein said first and second expandable and contractible elements comprise a first air bladder and a second air bladder, respectively.

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10. The balance practicing machine according to claim 9, wherein an air supply unit supplies air to said first and second air bladders.

11. The balance practicing machine according to claim 1, wherein said expandable and contractible member provides adjustability of size of said seat to accommodate a particular user's body type.

12. (Canceled)

13. The balance practicing machine according to claim 1, wherein an elevator mechanism is provided to raise and lower said seat.

14. The balance practicing machine according to claim 13, wherein said elevator provides adjustability of the height of said seat.

15. The balance practicing machine according to claim 13, wherein said elevator is repeatedly raised and lowered during operation of said drive mechanism to provide compound motion to said seat.

16. The balance practicing machine according to claim 1, wherein an elevator mechanism is provided to raise and lower said seat.

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17. The balance practicing machine according to claim 16, wherein said elevator is repeatedly raised and lowered during operation of said drive mechanism to provide compound motion to said seat.

18. A balance practicing machine comprising:

- a seat;
- a drive mechanism that imparts a swinging motion to said seat; and
- a moving device that is repeatedly actuated during operation of said drive mechanism to provide compound motion to said seat,

wherein said moving device comprises:

- an expandable and contractible member provided at a location of said seat corresponding to thighs of the user sitting on said seat; and
- a mechanism that automatically repeatedly expands and contracts said expandable and contractible member in alternately repeating upwardly-outwardly and downwardly-inwardly directions during operation of the drive mechanism to provide compound motion to the seat.

19. (Canceled)

20. The balance practicing machine according to claim 18, further comprising:

- an elevator mechanism provided to raise and lower said seat;

wherein said elevator is repeatedly raised and lowered during operation of said drive mechanism to provide additional compound motion to said seat.

21. The balance practicing machine according to claim 1, wherein the swinging motion comprises three degrees of freedom of movement to the seat in the form of a longitudinal (forward and backward) reciprocating linear motion and reciprocating pivoting motions around a fore-aft (longitudinal) and traverse axes.

22. The balance practicing machine according to claim 18, wherein the swinging motion comprises three degrees of freedom of movement to the seat in the form of a longitudinal (forward and backward) reciprocating linear motion and reciprocating pivoting motions around a fore-aft (longitudinal) and traverse axes.

23. The balance practicing machine according to claim 1, wherein the expandable and contractible member is provided integrally with the balance practicing machine.

24. The balance practicing machine according to claim 18, wherein the expandable and contractible member is provided integrally with the balance practicing machine.

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**(IX) EVIDENCE APPENDIX**

NONE.

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**(X) RELATED PROCEEDINGS APPENDIX**

NONE